

CLAIMS

1. An image pick-up device comprising:

image signal generation means for generating an image signal of a variable frame-rate picked-up image;

5 signal-recording-and-reproducing means for recording and reproducing the image signal;

frame rate conversion means for converting frame rates of the image signal generated by the image signal generation means and the image signal reproduced by the signal-recording-and-reproducing
10 means into a display frame rate;

monitor image signal generation means for generating a monitor image signal using an image signal having the display frame rate set by the frame rate conversion means; and

control means for controlling operations of the image signal
15 generation means and the signal-recording-and-reproducing means,

wherein if it is instructed to reproduce the image signal recorded in the signal-recording-and-reproducing means during recording of the image signal by this signal-recording-and-reproducing means, the control means causes the signal-recording-and-reproducing means to reproduce the recorded image signal at a
20 reproduction frame rate and also causes the monitor image signal generation means to generate the monitor image signal that displays on one screen a picked-up image based on the image signal generated by the image signal generation means and a reproduced image based on
25 the image signal reproduced by the signal-recording-and-reproducing means.

2. The image pick-up device according to claim 1, wherein when image confirmation is performed as the reproduction instruction, the

control means sets a position that is ahead of a recording position where this image confirmation is performed by a preset number of frames, as a reproduction start position of the signal-recording-and-reproducing means.

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3. The image pick-up device according to claim 1, wherein the control means uses a change in frame rate of the variable frame-rate picked-up image as the reproduction instruction, to set a range from a recording position where this change is made to a position that is distant from this recording position by a preset number of frames, as a reproduction position which is used by the signal-recording-and-reproducing means.

4. The image pick-up device according to claim 3, wherein if a post-change variable frame rate is higher than the reproduction frame rate, the control means causes the signal-recording-and-reproducing means to start reproduction together with the reproduction instruction and, if the post-change variable frame rate is lower than the reproduction frame rate, delays starting of the reproduction with respect to the reproduction instruction in accordance with the post-change variable frame rate.

5. In an image pick-up device that is connected to a signal-recording-and-reproducing device, the image pick-up device comprising:

image signal generation means for generating an image signal of a variable frame-rate picked-up image;

frame rate conversion means for converting frame rates of the image signal generated by the image signal generation means and an

image signal supplied from the signal-recording-and-reproducing device into a display frame rate;

monitor image signal generation means for generating a monitor image signal using an image signal having the display frame rate set
5 by the frame rate conversion means; and

control means for controlling operations of the image signal generation means and the signal-recording-and-reproducing device,

wherein if it is instructed to reproduce the image signal recorded in the signal-recording-and-reproducing means during
10 recording of the image signal by this signal-recording-and-reproducing means, the control means causes the signal-recording-and-reproducing means to reproduce the recorded image signal at a reproduction frame rate and also causes the monitor image signal generation means to generate the monitor image signal that displays
15 on one screen a picked-up image based on the image signal generated by the image signal generation means and a reproduced image based on the image signal reproduced by the signal-recording-and-reproducing means.

20 6. The image pick-up device according to claim 5, wherein when image confirmation is performed as the reproduction instruction, the control means sets a position that is ahead of a recording position where this image confirmation is performed by a preset number of frames, as a reproduction start position in the signal-recording-and-reproducing device.
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7. The image pick-up device according to claim 5, wherein the control means uses a change in frame rate of the variable frame-rate picked-up image as the reproduction instruction, to set a range from

a recording position where this change is made to a position that is distant from this recording position by a preset number of frames, as a reproduction position in the signal-recording-and-reproducing device.

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8. The image pick-up device according to claim 7, wherein if a post-change variable frame rate is higher than the reproduction frame rate, the control means causes the signal-recording-and-reproducing device to start reproduction together with the reproduction
10 instruction and, if the post-change variable frame rate is lower than the reproduction frame rate, delays starting of the reproduction with respect to the reproduction instruction in accordance with the post-change variable frame rate.

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9. An image pick-up device comprising:

an image signal generation portion that generates an image signal of a variable frame-rate picked-up image;

a signal-recording-and-reproducing portion that records and reproduces the image signal;

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a frame rate conversion portion that converts frame rates of the image signal generated by the image signal generation portion and the image signal reproduced by the signal-recording-and-reproduction portion into a display frame rate;

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a monitor image signal generation portion that generates a monitor image signal using an image signal having the display frame rate set by the frame rate conversion portion; and

a controller that controls operations of the image signal generation portion and the signal-recording-and-reproducing portion,

wherein if it is instructed to reproduce the image signal

recorded in the signal-recording-and-reproducing portion during recording of the image signal by this signal-recording-and-reproducing portion, the controller causes the signal-recording-and-reproducing portion to reproduce the recorded image signal at a reproduction frame rate and also causes the monitor image signal generation portion to generate the monitor image signal that displays on one screen a picked-up image based on the image signal generated by the image signal generation portion and a reproduced image based on the image signal reproduced by the signal-recording-and-reproducing portion.